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(Dublin District) Asylum.

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## Stuporose Insanity Consecutive to Induced Hypnotism.

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“Je n’ai jamais rien vu survenir de grave”\* wrote M. Richet to Professor Heidenhain, giving the results of the experiments he had made in hypnotism; and no doubt he was fully justified in doing so, since only one individual tested by him suffered any inconvenience, and that in a very slight and passing degree. Putting this evidence with his own observations, Heidenhain not unnaturally asserts that “there is no ground whatever for objection to hypnotic experiments,”† and again he says “it must be remembered that the necessity for precaution has not arisen as the result of unfavourable experience, but merely because it is our duty, for the sake of the person experimented on, to be over careful rather than not careful enough.”‡ The case under present consideration is, however, calculated to shake our confidence in such assurances of complete immunity from danger in hypnotic experiments, especially when conducted by unskilled persons; and indicates, moreover, that Professors Richet and Heidenhain owe their happy results as much to good fortune as to the

\* “Hypnotism,” Heidenhain, p. 100.

† “Hypnotism,” Heidenhain, p. 101.

‡ “Hypnotism,” Heidenhain, p. 102-3.

perfect freedom from risk they calculate on with so much certainty. Still further, it confirms the remarks of Binet and Féré, who say "with respect to the performance of such experiments in public, it should be condemned just as we condemn public dissections of the dead body, and vivisection in public."\* But this note of warning, though important, is perhaps the least interesting of the many considerations to which a study of this case gave rise, since it was particularly rich in the various psychological and physiological manifestations appertaining to the hypnotic and stuporose states. For this reason I desire to bring it under notice, and, owing to the kindness of my chief, Dr. Conolly Norman, who placed the man under my immediate charge for observations and treatment, I am enabled to do so. My grateful acknowledgments are also due to Surgeon-Major Martin, A.M.S., who kindly furnished me with the notes made by him on the patient's condition during his period of treatment at the Royal Infirmary, Dublin, prior to his removal to this asylum.

*Previous History.*—Patient is one of a large family, all healthy. Two of his sisters were "nervous;" no exact history of any family neuroses can be obtained. He was taken from school at an early age to help his father at the stone-cutting trade; but he grew tired, after a few years, of the monotony and fatigue this occupation involved, and consequently abandoned it to enlist. His life so far had been quiet, and his character moral and temperate; nor did it change for some time after his enlistment. Scarcely, however, had he been promoted to the rank of lance-corporal when his troubles commenced. His habits became irregular, and he found he had not even the mental capacity to properly discharge the duties of his position. This sense of unfitness daily increased with his misconduct, until at length he was reduced. He now became unhappy, led an intemperate and licentious life, indulging in excesses as far as his opportunities and means permitted. In the October of 1888, when physically unstrung by dissipation of the grossest kind, and when at the same time he was in a state of extreme nervous tension, he attended an entertainment, at which a lady undertook to perform some experiments in hypnotism. He presented himself as a subject, feeling highly excited, "his nerves all tingling." The mode of producing hypnosis was the common one of stimulating the sense of sight by causing him to gaze fixedly at a brilliant object. To this he quickly succumbed. Within a few minutes he was dead to his surroundings, and at no time afterwards had he the slightest recollection of any event that took place during his trance—as is usual in cases of profound hypnosis. Of

\* "Animal Magnetism," p. 378.

what happened immediately afterwards we have no means of learning, but he has an indistinct recollection of leaving the stage ; his first conscious feeling being an intense frontal headache. This was followed by a sense of extreme languor, which increased to such a degree that he had to lie up for some days. He was all this time "confused and queer," but recovered so far as to be discharged "improved" from the hospital. Yet he did not feel well—"his head all wrong ;" could not grasp orders given to him ; "tried to steady himself ;" heard people call him "stupid ;" had a distinct vision of a woman threatening him. He now felt impelled to drink heavily, committed various breaches of discipline ; was put under arrest, but his physical state being low he was sent to the infirmary on the 4th of October, when Surgeon-Major Martin notes :—

"Patient was under treatment a short time since for peculiar pains in his head, apparently of a neuralgic character. States that some time ago he was mesmerized by a woman who gave a performance in the Richmond Barracks, and that since then he has been more or less affected. He improved considerably ; was discharged to duty, but shortly after going out became very peculiar in manner, refused to go on parade, absented himself from duty for three days, at the expiration of which time he was apprehended near Beggar's Bush Barracks, having wandered about in the interval, and threatened to commit suicide by drowning himself. He was consequently sent here to-day for observation for insanity.

"*Present State.*—He has a peculiar staring expression ; eyebrows raised ; eyelids twitching ; is very restless, and when spoken to replies in a vacant and irrational manner. He does not complain of frontal pain, and his general health is good.

"Oct. 10, 1888.—Same state. Is very restless in his sleep, constantly tossing about and rambling. Says he is married to three women. Complains of being visited at night by an ugly fat old woman, who tells him to wash clothes.

"Oct. 20, 1888.—Condition unchanged. Says he would like to fight, but so far has been quiet and docile.

"Oct. 28, 1888.—Same state. Makes foolish remarks ; is restless at night, talking in his sleep. His health keeps very good. Prescribed bromide of potassium.

"Dec. 6, 1888.—Mental condition unaltered. Continues to talk in a foolish way, and looks very silly. He is perfectly quiet and tractable. His habits are cleanly, and he gives no trouble to the attendants.

"Dec. 12, 1888.—No change to note in habit or demeanour.

Jan. 3, 1889.—Passed Invaliding Board, which recommends his transfer to Richmond District Asylum for further observation and treatment.

"Jan. 14, 1889.—Transferred to Richmond Asylum."

Jan. 14, 1889 (on admission to Richmond Asylum).—Stands erect

and rigid; expression vacant; eyelids drooping, and affected with intermittent blinking movements; eyeballs rolled upwards and slightly inwards; pupils widely dilated, sluggish reaction to light and accommodation. nostrils expanded and sniffing; lips pursed and tremulous. His arms hang flaccidly, the hands, with out-stretched palms, beating the sides of the thighs with a regular rhythmical movement. He is silent, dull of comprehension, responding to questions only when interrogated on the same point repeatedly. When shaken and spoken sternly to there is a very gradual awakening to a condition akin to "expectant attention." When unnoticed there is an increase in the frequency and intensity of the automatic movements, and a relapse to the stuporose state. Memory defective; does not recollect circumstances of recent occurrence. When questioned, replies, if given at all, are monosyllabic and incoherent. The reflexes are to a slight degree exalted.

Jan. 16, 1889.—Condition noted above remains unchanged. More detailed examination reveals the presence of the condition designated by Charcot "l'hyper-excitabilité neuro-musculaire," well marked in the facial, less pronounced in the muscles of the limbs. Westphal's "paradoxical contraction," or, as Erlenmeyer prefers to call it, "contracted by antagonistic distention" (i.e., flexion maintained by stimulation of the extensor muscles of a limb already flexed) was looked for, but could not be demonstrated, though later, when the stuporose state gave way to a hysteroid condition, it was fairly-well marked. There is a noticeable want of accord between the thoracic and abdominal respiration—the former quick and shallow; the latter slow and unusually full. There is also well-marked vaso-motor disturbance—rapid alternating flushing and paling of the face. Owing to the position of the pupil and the disturbing effect of light on the eye, the condition of the fundus oculi could not be ascertained.

Jan. 23, 1889.—Very little change has taken place in his mental state since last note. He has been very quiet, never speaking except when spoken to; and then answering very slowly "Yes," "No," or "I don't know." He eats fairly; he is reported as "restless" at night, tossing in his bed with half-closed eyes; now and again starting up in fright. Movement is slow and clumsy. When spoken to he does not seem to grasp the meaning for some time, even when the question put is in reference to his own recent actions, he repeats the latter words of the query in a dull, echo-like tone—as, for instance, "Have you combed your hair to-day?" is answered by "Combed your hair to-day." He rarely sits down, standing slapping his hands gently to and from his sides, all the while looking vacantly before him. On this date he is sent to the School Division.

Feb. 1, 1889.—Since last note he has grown gradually brighter. There is a marked decrease in the stupor during the day, with a relative increase of sleep during the night, the hypnogenic zones evidently recovering their normal balance. The movements of the

eyelids and arms have become less frequent, and more irregular and intermittent ; the pulse slower and fuller ; the pupils less dilated ; the reaction period reduced. The psychical faculties are also more acute—a false accusation excites a blush ; a word of encouragement brings a pleased expression to his face, which, when in repose, is vacuous. The tendency to neuro-muscular hyperexcitability has almost entirely disappeared, and the phenomena of antagonistic contracture can be induced, but not in a very marked degree. The normal harmony between the thoracic and abdominal respiration has been restored. He takes part in an automatic manner in the various school exercises, enforced musical drills, associated singing classes, but does not voluntarily engage in any work.

Feb. 7, 1889.—Since last date the stuporous condition has steadily cleared away. There has been a gradual lifting of the veil, and each day gave evidence that all mental operations—volitional, emotional, and intellectual—were asserting their powers over the abnormal condition that clogged the due performance of their functions. With the re-awakening has come a sense of resistance to the suspending influences ; he now seeks to throw off the dreaminess, and is gratified with the success that attends his efforts. He yawns very often, stretches his legs and arms, rubs his eyelids ; now and again gives his whole body a shake. He answers more readily. He complains that a woman comes to his bedside at night to threaten him. He has come to a knowledge of his confinement here ; has an indistinct recollection of the events immediately antecedent to his removal to the Royal Infirmary ; and is unable by any effort of his memory to fill the blank dating from the moment he was hypnotized to his committal to the military prison. He feels acutely that he is a “lunatic,” knowing that it precludes him from further service.

Feb. 17, 1889.—Depression, and hysterical and emotional manifestations, are now the prominent features of the case. He regrets deeply that his mind gave way, he weeps at the thought of the sorrow his misfortune must have caused his parents, and sobs at the reflection that he cannot join his regiment again. A general feeling of nervousness, and *globus hystericus* are complained of, as well as a want of interest in life. Yet when reminded that very recently he attempted suicide he states he has no recollection whatever of it, and that even in his present sad state he is not by any means inclined to end his troubles by that method. On the contrary, he is anxious to return home to prove himself recovered, and to start on some new path of life. He feels restless ; is unable to employ himself indoors ; is losing sleep and appetite. He is now sent from the school to the farm division.

Feb. 27, 1889.—Mental and physical improvement to note. He eats and sleeps well, has in a great measure thrown off his depression, being buoyed up by the hope of speedy discharge. There is little to indicate the prolonged stupor and subsequent depression

through which he has passed. He has touched his normal mental level, which is of a comparatively low type, with a strong neurotic colouring. He is apprehensive, when spoken to, of hearing evil news, and when one day asked as a test to submit to a hypnotic experiment, he betrayed abject terror, and begs that he should not be urged to go through such an ordeal; at the same time he confessed his inability to resist the order should it be insisted on. He adds, moreover, that even looking at a gas light now confuses him, and that he is unable to sleep with uncovered head in a room where there is one burning. There is still a very marked vaso-motor disturbance manifested by flushing, paling, copious secretion of pale urine, and facial perspiration after mental strain.

March 7, 1889.—The past week has confirmed his convalescence, and much of the nervousness has been subdued by tonic treatment. He has now come to look on his attack of stupor as a misfortune of the past, not to be thought of again. He now looks forward, and is of good cheer. The pulse is firm, skin cool, physique robust, and spirits excellent. His expression, naturally dull, is to-day bright, in anticipation of his removal this afternoon by the military authorities. He is discharged recovered, five months from the date of the onset of his attack.

*Remarks.*—The foregoing history at once eliminates any suspicion one might be inclined to entertain of malingerer, so common in persons of this class. The ~~physical~~ manifestations were of a type too unusual to be simulated by one of such low mental calibre. Putting, therefore, that consideration aside, we find in the individual under notice the typical subject required by hypnotic experimenters for the production of the most remarkable phenomena. On the one hand the bout of excess plunged into immediately before he submitted himself to the hypnotic influence, furnished more than the degree of susceptibility which "depends on a greater or less degree of sensory irritability."\* On the other, we have this psychical hot-bed, centred in an "active muscular individual,"† to whom Mr. Hansen gives his preference. In a word, we have a subject made, as it were, to order for the exemplification of the hypnotic phenomena. His mind all on tension with curious expectation, vibrating with a sense of conscious distinction, this individual gazed earnestly and steadily at the bright object held by the operator, seeing it as a distinct luminous point, until gradually it was lost in an ever-widening golden nebula, which shut out all else. The sensorium hyperexcited for

\* Heidenhain, p. 30.

† *Ibid.*

many days and nights preceding is lulled to rest by the withdrawal of all stimuli, save one, which demanding for its reception the residual nerve force, exercises a lethal influence on consciousness—the last spark is taken from the well-nigh exhausted battery—the last flash is followed by profound darkness. Here it is that this case becomes of peculiar interest to the alienist. Before, however, proceeding to discuss the very extraordinary phases of mental disturbance that closely followed the experiment, I desire to touch briefly on the condition of a brain so rapidly and thoroughly deprived of its highest functions, and destined before its complete restoration to its normal state to be subjected to the suggestions of disordered senses, to the atrophic influence of prolonged stupor, and the ~~ranges~~ of emotional outbursts.

It has long since been remarked that\* “if the supply of arterial blood be altogether withdrawn the brain ceases to act, sensibility becomes extinct, and the mental powers are no longer manifested;” and again, that when perfectly oxygenated blood is sent to the head “dark and venous, exactly as received by the lungs, but being unfit to excite or support the action of the brain, the cerebral functions become impaired, and ere long a cessation of all the functions of sense, thought, and feeling may take place.” Very recently a careful observer has pointed out that a vast number of cases of stupor are due to cerebral malnutrition, the result of organic lesion—“a ~~steat~~tic condition of the arterial system of the brain”†—the remainder originating in malnutrition due to functional derangement of the vascular supply. For many years Heidenhain held that the allied condition of hypnosis might be explained by the theory of cerebral anaemia, but has now discarded it for the hypothesis of “inhibition of the ganglion cells of the cerebral cortex.”‡ Now in the case under notice there is a rare combination of psychical disturbances—lethargic, stuporose, and explosive—consequently for an explanation of such opposite conditions we must seek a complex cause; “anaemia” on the one hand, and “ganglionic inhibition” on the other, fail to satisfy us, nor does the union of the two solve the difficulty. Where then are we to turn for

\* Combe, “On Mental Derangement,” edited by Sir Arthur Mitchell, K.C.B., p. 46.

† “A Study of Stupor,” Dr. Whitwell, “Journ. Ment. Sci.,” Oct., 1889.

‡ “Animal Magnetism,” Heidenhain, p. 46.

help? Might I presume to venture on an opinion I would suggest that a chain of effects is worked out somewhat after this fashion:—

(a.) *Primary* impaired nutrition of the nerve cells composing the ganglionic centres, increasing their irritability and susceptibility to inhibition, such malnutrition being the result of excesses (alcohol and sexual), whereby there has been an undue strain on the nervous system.

(b.) Psychical phenomena—(Lethargy, stupor, ~~Delusions~~ ; Hallucinations ; Suicidal impulse ; Emotional and Hysteroid outbursts)—started by stimulation of the optic nerve.

(c.) Vaso-motor disturbances due to the deranged functional activity of the nerve centres, affecting and maintaining the various abnormal psychical phenomena.

In support of this view it may be remarked that (as is well known) the results of excesses in the first instance are manifested through the nervous system long before any coarse physiological change has taken place in the organ which has been ill-treated. Here the overstrain lowered the inherent vitality of the nerve-centres, and rendered them more than usually susceptible to inhibition. Let us see how the hypnotic strain is borne. The optic nerve being stimulated, “the luminous vibrations directly transformed into nervous vibrations by the peculiar action of the retina, are all at first concentrated in the grey centres in the optic thalamus, and radiated thence chiefly into the antero-lateral regions of the cerebral cortex.”\* Now, bearing in mind that the cerebrum itself has a very marked influence over the vaso-motor centre, as is evidenced by the phenomena of blushing,† it may be assumed that the “nervous vibrations” having found their way into the cortical substance at length reach the chief vaso-motor centre. This *complex-composite* centre is situated in close proximity to, and intimately connected with many other important centres in the locality, the result being that their functions are thrown out of gear in consequence of their diminished blood supply—stimulation of the vaso-motor centres causing contraction of the cerebral vessels. Thus we have the centres not alone affected in their nutrition in *quality*, but also in *quantity*, at a time, too, when they have to bear up against the exhaustion consequent to the induction of hypnosis. Deprived of their intrinsic support, and overcome by external influences, the cerebral functions are at first

\* “The Brain and its Functions,” Luys, p. 261.

† Landois and Stirling’s “Physiology,” p. 677.

rendered dormant. With improved nutrition a struggle for reinstatement is entered on, but the subjugation of the will has been so complete that the period of stupefaction is prolonged unduly, until at length, after violent emotional oscillations, the equilibrium is once again restored. Having thus ventured to form some idea of the psychical changes and their *modus operandi*, it will be interesting to note some of the more uncommon characters of the case.

(1.) *The undue length of the period of stupefaction during which volition and consciousness were partially dormant, and the patient was altogether irresponsible for his actions.*—Maudsley has pointed out that in a *minor* degree all hypnotic states are followed by mental enfeeblement, and says in this connection, “after coming out of this trance a little time must elapse before the will resumes its power; for a while he remains unduly susceptible to the suggestions of others, and too easily influenced by commands.”\* Here, however, the suppression of the will was so absolute, and exercised such an undue effect, that it re-established itself with difficulty, for a time imperfectly, and as far as observation went, permanently weakened. Under certain circumstances the subject could at this earlier period be so manipulated that as a passive agent he would perpetrate crime and outrage. It is needless to dwell on the medico-legal importance of this fact; and Krafft-Ebing has very recently shown that the danger is none the less when the ideas are auto-suggestive, or post-hypnotic, than when suggested by a third person. This condition in the patient lasted nearly four months.

(2.) *The uncommon character of the Hallucination.*—Associated with the usual visionary disturbances of an ill-defined and intermittent kind, was the constantly-recurring image of a threatening old hag—a picture so vivid that it inspired terror long after its unreal nature was fully understood. The persistence of the hallucination intensified at every repetition is very striking, and may possibly have originated in the distorted visual image of some movement of the lady operator at the moment he was emerging from the profound hypnotic trance. It is to be remarked that the hallucination recurred at periods when the patient was between waking and sleeping, and that it persisted long after the delusion associated with it had passed away. In this latter respect it differed from Hack Tuke’s experience of like conditions, for he states that “this cerebral impression may persist for

\* “Pathology of Mind,” p. 60.

some time, but it is gradually effaced. It disappears with the delusion with which it was associated."\* In few recorded cases has the hallucination taken so complete and distinct a nature. Stirling and Landois† are of opinion that "hallucinations occur only in some individuals, when they awaken from the deep sleep (usually consisting of sparks of fire and odours) being very strong and well pronounced," but here we have one of a more distinct and distressing type. No "sparks of fire or odours" were complained of, but "flashes of light and floating, dark objects" caused some distress at the earlier part of the disorder. The old hag's features were described as "cruel and awful," her clothes as "bright and white," her features as "threatening." She always seemed first to rush at him and then come to a standstill a little distance from him. In connection with this hallucination it is also interesting to note the various mental conditions which influenced it. At first we have a delusion which creates a belief in the material existence of the imaginary assailant. Then we have (during the period of the re-establishment of the higher psychical functions) terror still inspired by what has been recognized as a delusion and despised as such. A feeling of fear and helplessness springing from what is known and felt at the same moment to be the production of a morbid mental state (a state which Pierre Janet terms "*misère psychique*") is a condition which beautifully illustrates a mental state in which "the compact consciousness of the supreme centres has been broken up, a disordinate tendency fostered, and the disassociated centres are prone to continue their abnormal and independent action."‡ This state, the same observer asserts, frequently follows too oft-repeated hypnotic experiments in the same individual, and he concludes by saying "and assuredly that way madness lies."§ Tuke coincides with this opinion, differing from Charcot, who, he says, repels the notion that persons suffer any inconvenience in consequence of hypnotism. Still less does he admit its effects are dangerous. It may be that the higher sensory organizations of our Gallic neighbours are more easily restored to their equilibrium owing to their inherent versatility than those of the stolid Briton, but certain it is that very varied experiences have been gained on different sides of the Channel.

\* "Sleep-walking and Hypnotism," p. 89.

† "Physiology," p. 686.

‡ Maudsley, "Pathology of Mind," p. 61.

§ "Sleep-walking and Hypnotism," p. 119.

(3). *The Suicidal Impulse.*—We have noted that the condition of the patient was to a certain extent dangerous to others; we have now to consider the suicidal impulse which might have proved fatal to himself. At a time when active mental depression had ceased, and volition was practically dormant, he is found to make a determined and apparently deliberate effort to cut short his life. Self-destruction springs up when self-preservation is sleeping, and external influences alone avert a catastrophe of a fatal character. Since at no time prior to the hypnotic trance did mental depression give rise to any such idea, its occurrence immediately afterwards may be considered an outburst of melancholic despair, availing itself of the lethargy of all counteracting influences, and which would have never reached so grave a climax had not the normal functions of the brain been partially suspended. Not even in the dark days of despondency which overshadowed him when emerging from his stupor, and during which all the fruits of his misfortune dawned upon him, did he for one instant contemplate such a loop-hole from his troubles. When informed of his attempt at self-destruction he was horrified to think of its possible results, and could scarcely believe that he was at any time so deranged. For an explanation of this phase in his history, I am inclined to think that during the period of stupefaction there was superimposed a transient acute depression of a nature described by Bevan Lewis. "Occasionally," he says, "as the *outcome of alcoholic intemperance* we meet with a form of melancholic hypochondriasis which once recognized will not be readily overlooked, *associated with extreme mental enfeeblement of will, and desperate impulsive conduct as its miserable accompaniment.* Such cases are highly *neurotic by heritage.*"\* The italics are mine, to indicate that the patient had in a very pronounced degree the conditions requisite for the production of this mental state. It is of course possible that this impulse might have been the result of suggestion, but there is no evidence that such was the case.

(4.) *Sleeplessness* was in this, as it is in so many other cases of mental disorder, the *bête noire* of the physicians. With its amelioration a gradual return to the normal condition was noted, consequently it was evident that a complete regulation of the hypogenic zones was the best means to recovery. Every effort was therefore made to convert the light hypnotic

\* "Mental Diseases," p. 147.

state into one of deep natural sleep; various drugs were tried with varying results, the best effect being obtained from sulphonal. This drug (the action of which was very thoroughly investigated by my chief, Dr. Conolly Norman, to whose favourable reports on it its present extended use in this country is mainly due) was given for one prolonged period in thirty-grain doses at supper, and at no time did it produce disagreeable symptoms. Its use was interrupted now and again, with the result that sleep became disturbed, appetite fell off; and there was an increased disquietude during the stage of depression. I have little doubt that it very materially affected the favourable result in this case.

It may, perhaps, be considered that too much has been said on this isolated case, but the writer's desire is very great that a mental condition so complex may be discussed by competent judges. Hypnotism is fast taking its place as a science, and anything touching it should be carefully considered, and though asylum physicians may not hope for very much from it as a therapeutic measure, it cannot fail to be of the highest interest to them as psychologists. Dr. Moll,\* of Berlin, says "it is a mine for psychological investigation," and confidently expresses the hope "that the study of it will help to clear up the hitherto dim field of mental life, and will help to free us from the mountain of superstition instead of increasing it." He is supported in this view by Krafft-Ebing, Max Dessoir, and Beaunis, the latter being of opinion that "hypnotism is to psychologists what vivisection is to physiologists."

\* "Hypnotism," Albert Moll, p. 333.











